



State of Utah

Department of
Environmental Quality

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Executive Director

DIVISION OF AIR QUALITY
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Director

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Lieutenant Governor

DAQE-IN3059001-06

August 16, 2006

John Hays, Director for Maintenance
South Valley Water Reclamation Facility
7495 South 1300 West
West Jordan, UT 84084-3417

Dear Mr. Hays:

Re: Intent to Approve: Biosolids Thermal Drying Facility for Water Reclamation Plant, Salt Lake
County - CDS B; ATT; NA; NSPS
Project Code: N3059-001

The attached document is the Intent to Approve (ITA) for the above-referenced project. ITAs are subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Ms. Milka M. Radulovic. She may be reached at (801) 536-4232.

Sincerely,

Rusty Ruby, Manager
New Source Review Section

RR:MR:kw

cc: Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**INTENT TO APPROVE: Biosolids Thermal
Drying Facility for Water Reclamation Plant**

**Prepared By: Milka M. Radulovic, Engineer
(801) 536-4232
Email: milkar@utah.gov**

INTENT TO APPROVE NUMBER

DAQE-IN3059001-06

Date: August 16, 2006

South Valley Water Reclamation Facility

**Source Contact
John Hays
(801) 566-7711**

**Richard W. Sprott
Executive Secretary
Utah Air Quality Board**

Abstract

South Valley Water Reclamation Facility (SVWRF) submitted a Notice of Intent to construct and operate a biosolids thermal drying facility consisting of two steam heated biosolids dryers, and associated support equipment for processing of dewatered waste activated sludge (WAS) into a dried pellet product. The drying process consists of wet and dry solids material handling systems that are completely enclosed. Each of two indirectly heated drying process trains consists of one natural gas fired boiler rated at 14.3×10^6 Btu/hr (steam boiler to provide heat for drying) and one thermal oxidizer rated at 1.4×10^6 Btu/hr used to destroy organics contained in drying process off-gasses. Dried pellets will be collected in the two storage silos equipped with dust collectors to control particulate emissions during loading and unloading.

Currently, SVWRF dewateres WAS in existing belt filter presses and trucks the biosolids to disposal sites where they are composted or land applied. In addition to this, the SVWRF has three existing natural gas fired boilers for building space heating with combined rating of 5.33×10^6 Btu/hr, and two stand by diesel emergency diesel fired generators with combined rating of 3,952 bhp. The existing SVWRF treatment plant was placed in service in 1985 in West Jordan and based on its emissions qualified under small source exemption.

This source is located in Salt Lake County, a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for PM_{10} and SO_2 .

New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units apply to this source. This source will have the potential to emit less than 1 tons per year (ton/yr) of all hazardous air pollutants (HAPs) combined and it is not located at a facility, which is major source of HAPs. Therefore, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Subpart VVV of 40 CFR Part 63 for POTW, do not apply to this source.

The emissions from the entire source, in tons per year, are as follows: PM_{10} =8.66, NO_x =8.89, SO_2 =0.2, CO =28.83, VOC =1.1, $HAPs$ =0.10.

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order (AO) by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notice of intent to approve will be published in the Salt Lake Tribune and Deseret News on August 21, 2006. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed AO conditions during this period and make any comments you may have. The proposed conditions of the AO may be changed as a result of the comments received. Unless changed, the AO will be based upon the following conditions:

General Conditions:

1. This Approval Order (AO) applies to the following company:

Site Office

South Valley Water Reclamation Facility
7495 South 1300 East
West Jordan, Utah 84084

Phone Number (801) 566-7711

Fax Number (801) 566-7734

The equipment listed in this AO shall be operated at the following location:

7495 South 1300 East, West Jordan, Utah

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,496.205 km. Northing, 421.913 km. Easting, 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401-1.
5. All records referenced in this AO or in applicable NSPS and/or NESHAP and/or MACT standards, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for the two years minimum.
6. South Valley Water Reclamation Facility shall install and operate the two biosolids drying process trains, and associated with two 14.3×10^6 Btu/hr boilers and venturi scrubbers followed by two thermal oxidizer rated at 1.4×10^6 Btu/hr and shall conduct its operations of the Water Reclamation Facility in accordance with the terms and conditions of this AO, which was written pursuant to South Valley Water Reclamation Facility's Notice of Intent submitted to the Division of Air Quality (DAQ) on May 3, 2006 and additional information submitted to the DAQ on August 11, 2006.
7. The approved installations shall consist of the following equipment or equivalent*:
 - I. Two Drying Trains consisting of:

A. Two (2) Steam Boilers

Fuel Type	Natural Gas
Type of Burner:	30 ppm NO _x
Maximum Heat Input:	14.3 x 10 ⁶ Btu/hr, each

B. Two Thermal Oxidizers (after burners)

Fuel Type	Natural Gas
Maximum Heat Input:	1.4 x 10 ⁶ Btu/hr, each
Exhaust:	20 ppm methane

C. Two (2) storage silos, each with three bin vent exhausts. Each bin vent exhausts through the cartridge filters.

D. One (1) Pulse Jet Fabric Filter used during truck filling from the two storage silos

E. De-dusting Solution System serving the screw feeder

F. One set of spray tower condenser and ventury scrubber per dryer train**

II. Miscellaneous Equipment

G. One (1) Diesel fuel fired emergency generator rated at up to 2,682 bhp

H. One (1) Diesel fuel fired emergency generator rated at up to 1073 bhp

I. Miscellaneous natural gas fired boilers/heaters with combined heat rate of up to 6.13 MMBtu/hr (Existing 5.33.

* Equivalency shall be determined by the Executive Secretary.

** This equipment is listed for informational purposes only. There are no emission exhausts from this equipment.

8. South Valley Water Reclamation Facility shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #7 has been completed and is operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-1843.

9. Visible emissions from the following emission points shall not exceed the following values:

- A. All bin vents and baghouse - 10% opacity
- B. All natural gas combustion exhausts - 10% opacity
- C. All conveyor transfer points - 10% opacity
- D. All diesel engines - 20% opacity
- E. Conveyor drop points - 20% opacity
- F. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

10. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emission determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made 1/2 vehicle length or greater behind the vehicle and at approximately 1/2 the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.
11. Emergency generators shall be used for electricity producing operation only during the periods when electric power from the public utilities is interrupted, or for regular maintenance of the generators. Records documenting generator usage shall be kept in a log and they shall show the date the generator was used, the duration in hours of the generator usage, and the reason for each generator usage.

Fuels

12. The owner/operator shall use only natural gas as a fuel in all boilers/heaters.
13. The owner/operator shall use #1 diesel fuel in the emergency generators.
14. The sulfur content of any fuel oil or diesel burned shall not exceed:

0.05 percent by weight for diesel fuels

The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of used fuel oil shall be either by South Valley Water Reclamation Facility's own testing or test reports from the used oil fuel marketer.

Federal Limitations and Requirements

15. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subpart A, 40 CFR 60.1 to 60.18 and Subpart Dc, 40 CFR 60.40c to 60.48c (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) apply to this installation.

Records & Miscellaneous

16. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.
17. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

Under R307-150-1, the Executive Secretary may require a source to submit an emission inventory for any full or partial year on reasonable notice.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

<http://www.airquality.utah.gov/>

The annual emissions estimations below include point sources and do not include fugitive emissions, fugitive dust, road dust, tail pipe emissions, grandfathered emissions etc. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential to Emit (PTE) emissions for this source (the entire plant) are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM ₁₀	8.66
B.	SO ₂	0.2
C.	NO _x	8.89
D.	CO	28.83
E.	VOC	1.1
F.	Total HAPs	0.1

The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final Approval Order.

Sincerely,

Rusty Ruby, Manager
New Source Review Section